DOCUMENT RESUME

ED 263 629 CS 505 071

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TITLE Locus of Control as a Mediator of College Students' Reactions to Teacher Compliance Attempts.
PUB DATE May 85
NOTE 25p.; Paper presented at the Annual Meeting of the International Communication Association (35th, Honolulu, HI, May 23-27, 1985).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Behavioral Science Research; *Behavior Change; *Behavior Modification; Classroom Communication; Classroom Techniques; Cognitive Restructuring; College Students; Higher Education; *Locus of Control; *Student Behavior; *Teacher Behavior
IDENTIFIERS *Behavior Alteration Techniques

ABSTRACT

A study was conducted to determine the effects of student locus of control on perceptions of and resistance to teacher influence attempts. Subjects, 302 college students, were provided with 22 sets of Behavior Alteration Messages and were instructed to rate on a 1-5 scale "how frequently your teacher uses statements of each type to get you to change your behavior in the classroom." Higher scores indicated greater frequency. To measure likelihood of resistance, students were asked to rate on the same scale how likely they would be to resist statements of each type if their teachers were to use them to change students' behavior in the classroom. Analyses of results suggests that locus of control is a significant predictor of students' selective perceptions of teacher Behavior Alteration Technique (BAT) for 14 of the 22 BATs analyzed. Externally oriented students, those who rely on outside forces to govern their behaviors, more often interpret teachers as more powerful people than do internally oriented students. Further research is needed to answer questions that arose as a result of this study. (DF)

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Locus of Control as a Mediator of College Students' Reactions to Teacher Compliance Attempts

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Top 3 paper competitively selected for presentation within the Instructional/ Developmental Communication Division of the International Communication Association, Hawaii, May, 1985. Also, in press in Communication Yearbook 9.

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CS 505 071

Abstract

Previous research on teacher power in the classroom has relied on a paradigm which overlooks student dispositional factors that may interact with student reactions to teacher compliance attempts. Focusing on individual differences, the present study examined how college students' perceptions of and resistance to their teachers' classroom control techniques might be mediated by students' locus of control orientations. Multivariate and univariate analyses revealed that students' perceptions of teacher use of a majority of specific control strategies are a function of internal-external orientations. Additionally, discriminant analysis models showed that students with differing locus of control orientations can be classified by their perceptions of teacher control use. However, locus of control was found not to mediate college students' likelihood of resisting teacher control techniques. The discussion focuses on these results by drawing from the known interpersonal response tendencies of internals and externals, and suggests directions for future research.

Locus of Control as a Mediator of College Students' Reactions to Teacher Compliance Attempts

Teacher control techniques have been the focus of a recent series of studies entitled "Power in the Classroom" (Kearney, Plax, Richmond & McCroskey, in press, 1984; McCroskey & Richmond, 1983; McCroskey, Richmond, Plax & Kearney, 1984; Plax, Kearney, McCroskey & Richmond, 1984a; Richmond & McCroskey, 1984). Designed to expand previous perspectives on classroom management, these studies have isolated power-based strategies (Behavior Alteration Techniques; BATs) and representative messages (Behavior Alteration Messages; BAMs) that teachers employ to elicit student compliance. The power-in-the-classroom series has shown that teachers report implementing a variety of these techniques to manage student disruptions in the classroom. There are, however, three important considerations overlooked in this series.

First, only the Plax et al. (1984a) study examined BAT use in the college classroom. Their results indicated that students' affect and perceptions of teacher immediacy were associated with students' perceptions of teachers' BAT use. Not reported, though, were those BATs college students perceived their instructors to use most and least frequently. Because earlier research in the series found that BAT use differed across elementary and secondary grade levels (Kearney et al., 1984), it is reasonable to assume that teachers' use of BATs differ with college-age learners as well.

Second, none of the serial studies on power in the classroom has examined the potential behavioral responses of students to teachers' use of different BATs. One type of response deserving attention in this regard is students' likelihood of <u>resisting</u> their teacher's attempts at control. Wheeless, Barraclough, and Stewart (1983) have noted that "it is misleading to focus on how real someone's power is independent of those over whom the power is being

exercised" (p. 127). If a teacher is not perceived by students to have a given type of power, then his/her attempts to implement that power likely will be in vain (McCroskey & Richmond, 1983). As a corollary to this point, McLaughlin, Cody, and Robey (1980) have stated that "research interest in compliance-gaining activity has been one-sided, focusing only on the potential persuader (the agent) as an active element in the interpersonal persuasive attempt; yet the recipient of a particular compliance-gaining message (the target) may, for whatever reason, choose to resist compliance" (p. 14).

Finally, the recent series of studies on teacher power has relied on a process-product paradigm. Such a paradigm has been criticized by educational researchers for its restrictive explanatory power (e.g., Berliner, 1976; Doyle, 1977; Weinstein, 1983). According to Weinstein (1983), "much of the research on instructional behavior has focused only on the relationship between teacher behaviors and measures of student learning. As a result, little has been learned about the nature of students' responses to teaching events" (p. 294). Similarly, several of the instructional communication studies on teacher power have centered around the product of student learning as it relates to the process of classroom management via the exercise of specific power bases. Granted, learning is and should continue to be the primary outcome variable of concern to instructional communication researchers. But knowing also whether certain dispositional factors might be mediating students' classroom perceptions should lead to a more thorough understanding of how student learning is affected by given classroom processes and teacher behaviors (Weinstein, 1983). In an attempt to address these concerns, the present investigation is the second in a series of projects which focus on college students' reactions to instructors' use of BATs in the classroom.

The Research Program

The initial project in this series dealt with the first two concerns discussed above: 1) those BATs college students and teachers perceived as most and least frequently used, and 2) those BATs college students reported they were most and least likely to resist (Plax, Kearney, Stewart, & Downs, 1984b). This second investigation was designed to address the third concern by examining the dispositional factor of students' locus of control as a potential mediator of students' perceptions of and resistance to teacher BAT use in the college classroom.

Locus of Control and Compliance

While previous research on power in the classroom has relied on teacher reports of those BATs perceived as most and least frequently used and as effective or ineffective, Plax et al. (1984b) examined college students' perceptions of teacher BAT use and student resistance. Employing psychological reactance theory (Brehm, 1966, 1972) as their framework, these authors argued that college-age learners may be prone to resist teacher influence attempts in order to maintain a sense of behavioral freedom. Because teachers typically are charged with the responsibility of exerting control in an effort to maintain attention to the task, students often are expected to "give in" to teacher influence. By virtue of the role requirements inherent in the teacher-student relationship, then, reactance, and thus resistance, become probable consequences of compliance-gaining attempts.

An examination of student reports of BAT use and resistance (Plax et al., 1984b) indicated that college students may be more or less resistant to all types of control implemented in the classroom. Regardless of the change requested or advocated, it was further argued by Plax et al. (1984b) that the specific strategy employed to gain student compliance may arouse student

resistance. In support of this reasoning, the researchers found that college students indicated a greater likelihood of resistance to those BATs that communicated punishment or coercive intent as well as those BATs that relied on peer pressure or peer and teacher modeling. In contrast, students reported minimal resistance to particular prosocial or reward-based BATs. Importantly, students also indicated that their teachers used primarily these same prosocial BATs. While the first investigation in this series examined the use and relative effectiveness of teacher BAT use across college students generally, this second investigation focused on teacher BAT use and student resistance specifically as a function of student locus of control.

Locus of control (Lefcourt, 1982; Rotter, 1966) is a construct which distinguishes people on the basis of perceived control of behavior, and distinguishes between internals and externals. The generalized nature of locus of control orientations is particularly relevant for purposes of analyzing persons' reactions to compliance-gaining attempts (Wheeless et al., 1983). Specifically, since the exercise of social power depends on the target's perceptions, his/her perceptions of resistance to particular power-based compliance-gaining techniques used by others likely will depend on whether s/he is oriented to believe that internal or external factors have the greatest impact over his/her behavior. The 22 BATs deduced in the Kearney et al. (1984) study represent a unique set of compliance-gaining techniques specifically tied to the classroom context. Such techniques are message-based strategies through which teachers attempt to exercise power and control over their students. As such, the potential use and effectiveness of BATs for optimizing teacher control over student behavior may be conditional on students' locus of control orientations.

Although no research to date has directly assessed the differential effects of internal and external orientations on students' perceptions of specific classroom management techniques, numerous studies have examined different student characterisics that influence perceptions of teacher behaviors (e.g., Milgram, 1979; Weinstein, Marshall, Brattesani, & Middlestadt, 1982). In a recent review of such research, Weinstein (1983) observed that conflicting results often are obtained simply because teachers may respond differentially to students. As such, different types of students may perceive teacher behaviors differently. Pertinent to the present study, students' locus of control may either mediate perceptions of teachers' control behaviors or teachers might actually implement strategies differentially as a function of students' control orientations.

More specifically, teachers may actively attempt to control externals as opposed to internals. Because externals are defined as other-dependent, teachers may be more inclined to initiate control with externally oriented students. On the other hand, teachers may be less prone to employ control with interally oriented students simply because internals are defined as more independent. Regardless of whether teachers use BATs frequently to control both types of students, externals and internals may perceive frequency of BAT use differently. That is, externally oriented students are those who perceive themselves to be under the control of powerful others such as teachers. As a result, externals may be more alert and sensitive to numerous teacher control attempts. Conversely, internally oriented students may underestimate the frequency with which teachers implement BATs to gain student compliance. Because internals typically do not rely on external cues to control their own behavior, internals may disregard, ignore, or distort teacher messages of

control. We might also argue, however, that internals are more likely than externals to overestimate teacher control attempts. Because teacher-initiated control may be a source of irritation or threat to self-control, internals may selectively perceive even occasional BAT use as frequent.

In terms of compliance or resistance, several studies suggest that internals and externals can be expected to respond differently to the influence attempts of others. Getter (1966) and Strickland (1970) both found that externals are more likely than internals to comply with requests when made aware of potential rewards associated with the advocated behavior. Generally, externals are likely to comply with a request whenever the requestor makes apparent or available the means by which reward can be obtained (Phares, 1976). Given this general trend, we may speculate that externally oriented students should be more likely than internally oriented students to comply with those BATs which preview for students the potential for receiving reward: Immediate Reward from Behavior ("You will enjoy it"), Deferred Reward from Behavior ("It will help you later on in life"), Reward from Teacher ("I will give you a reward if you do"), and Reward from Others ("Others will be proud of you").

Other studies have shown that internals and externals differ in their likelihood of complying with requestors of high status. Ritchie and Phares (1969) found that externals are more likely to comply with a high status source than with a low status source, and more likely to do so than are internals. Extending these findings, Ryckman, Rodda, and Sherman (1972) found that externals are likely to comply with a high status source irrespective of the perceived relevance of the source's expertise. Based on these findings, externals might be expected to show greater likelihood of compliance than internals with those BATs that reflect teacher authority, expertise, or teacher/student role hierarchy: Legitimate Higher Authority ("It's school policy"), Legitimate

Teacher Authority ("Because I told you to"), Teacher Modeling ("This is the way I always do it"), Expert Teacher ("From my experience, it's a good idea"), Positive Teacher/Student Relationship ("I will like you better if you do"), and Negative Teacher/Student Relationship ("I won't be proud of you").

Wheeless et al. (1983) have suggested that internals are likely to be more compliant than externals with certain value-based messages. Reasoning that internals are given more than externals to concerns of self-fulfillment and self-determination, internals may be more predisposed toward strategies pertinent to their own values and obligations. In contrast, externals are more susceptible to environmental influences and personal relationships. With these differences in mind, internals may be more likely to comply with those BATs which signal certain values and obligations: Personal Student Responsibility ("It is your obligation"), Responsibility to Class ("The class depends on you"), Debt ("You promised to do it"), Altruism ("Do it for the good of the class"), Self-Esteem ("Because you're capable"), and Teacher Feedback ("To see how well you can do it"). On the other hand, because externals are more compliant with requests based on personal relationships and identification, externally oriented students may be more likely to comply with BATs that suggest compliance as a function of peer pressure or teacher referent power: Punishment from Others ("Your classmates will reject you"), Guilt ("You'll make others unhappy if you don't"), Normative Rules ("All of your friends are doing it"), Peer Modeling ("The friends you admire do it"), Positive Teacher/Student Relationship ("I will like you better if you do"), and Negative Teacher/Student Relationship ("I will lose respect for you").

Research Questions

The following research questions were asked to probe the mediational effects of student locus of control on perceptions of and resistance to

particular teacher influence attempts. The first research question concerned college students' selective perceptions of the frequency of BATs used in the classroom. Because externals may rely on powerful others to control their behaviors, teachers may actually use more BATs with externally oriented students, or externals may be more attentive to BATs when teachers do implement them. On the other hand, internals may be more sensitive to teacher control attempts given the violated expectancy that self, not others, is the major source of control. Thus,

Research Question 1: Do students' perceptions of teachers' use of BATs vary as a function of the students' locus of control orientations?

The second research question concerned potential student resistance to selective BAT use as a function of students' locus of control. Several studies have indicated that internally oriented students may be less likely than externals to comply with specific types of compliance attempts, but more likely to comply with other types. In addition, internals adapt better to situations where little control is exerted over them, while externals more readily adapt to situations where a great deal of external control is initiated (Sandler, Reese, Spencer, & Harpin, 1983). No research, however, has examined the relationship of students' locus of control and resistance to specific Behavior Alteration Techniques employed in the classroom. Evidence on the differences between internals and externals in this regard should prove beneficial in determining which BATs are more or less effective given students' individual orientations toward control. Thus,

Research Question 2: Do students' reported likelihood of resistance to teachers' use of BATs vary as a function of their locus of control orientations?

Method

Sample

The sample consisted of 302 students enrolled in large lecture courses in mediated communication at a large mid-Atlantic university. Comprised of 118 women and 184 men, students identified themselves as freshmen (44.72%), sophomores (31.37%), juniors (14.91%), or seniors (9.01%). In order to obtain maximum variability in subject matter fields and a broad sample of instructors, students were asked to complete the instruments with reference to "the class which you attend immediately before this one." Data relating to perceived frequency of teachers' use of BATs and to likelihood of resistance were collected two weeks following the collection of data on locus of control and demographics. Code numbers were used to guarantee anonymity and to allow for data analysis. Students were informed at the beginning of each data collection session that the study was designed to learn more about students' attitudes toward instruction at their university.

Measurement

Behavior Alteration Techniques: BAT Use. Students were provided with 22 sets of Behavior Alteration Messages (BAMs) representing each of the BATs generated by Kearney et al. (1984). Since the original BAMs represented messages more appropriate to elementary and secondary teachers, a set of BAMs revised for college instructors was employed (Plax et al., 1984a). BAT labels were omitted from the questionnaire. To measure the frequency with which students perceived their instructors to use each BAT, the students were asked to rate on a 1-5 scale "how frequently your teacher uses statements of each type to get you to change your behavior in the classroom." Higher scores indicated greater frequency. The BAT instrument was originally designed to reflect the independence of the 22 separate sets of message groupings.

Based on data obtained from both teachers (Kearney et al., in press, 1984) and students (McCroskey et al., 1984), no meaningful underlying factor structures have been obtained. Consistent with previous research then, the BAT instrument was assumed to represent 22 relatively independent categories.

Behavior Alteration Techniques: BAT Resistance. To measure likelihood of resistance, students were asked to rate on a 1-5 scale "how likely you would be to resist statements of each type if your teacher were to use them to change your behavior in the classroom." Thus, students rated their likelihood of resisting each BAT independent of how frequently they perceived their teachers to use that BAT. Higher scores indicated greater likelihood of resistance.

Locus of Control. Students' internal-external control orientations were measured by Levenson's (1974) 24-item, Likert-type locus of control scale. This particular measure was chosen in preference to other locus of control measures for three reasons: (1) each item references the individual respondent rather than people in general; (2) each item is responded to on an interval scale rather than a dichotomous, forced-choice scale typical of other locus of control measures; and (3) each item refers to specific social or personal situations as opposed to more global contexts (Levenson, 1974, 1981).

Deviating from the original conceptual and operational definition of locus of control as a single continuum of power attribution ranging from high externality to high internality (Rotter, 1966), Levenson (1974) reasoned that the construct can be conceived as multi-dimensional. Arguing that externality may be function of powerful others or chance, Levenson's operationalization of locus of control includes items reflecting three dimensions: Internal,

Powerful Others (External), and Chance (External; IPC). Consistent with this revised interpretation of the construct, data in this study were submitted to principal components factor analysis followed by varimax rotation, forcing a 3-factor solution. Unlike Levenson's results, however, the majority of the items tapping Powerful Others and Chance had their primary loadings on the same factor (externality). All items measuring internality loaded on a separate second factor. Specifying a 2-factor solution, results indicated that factor one consisted of both types of externally-based locus of control items (Eigenvalue = 4.58, variance accounted for = 19%), while factor two was comprised of internally-based items (Eigenvalue = 2.30, variance accounted for = 10%). The obtained interfactor correlation was -.20.

Although the Levenson (1974) IPC scale was originally interpreted as multi-dimensional, our data suggest that it cannot be used as Levenson recommended. That is, careful scrutiny of Levenson's (1974) original report on development of the IPC scale reveals that the scale may not warrant a multi-dimensional interpretation. More specifically, Levenson obtained a 7-factor solution (Eigenvalues $>$ 1.00) with only 17 of the 24 items having their primary loadings on the first three factors. Moreover, the Powerful Others and Chance factors were correlated positively and moderately high at .59. In contrast, neither factor correlated significantly with the Internal factor (r's = -.14 and -.17 respectively). Consequently, the results of Levenson's report suggests that the IPC scale may not be interpreted accurately as having three independent factors.

Consistent with the original conceptualization of locus of control, then (Rotter, 1966), we reasoned that our data should be treated as a unidimensional indicator of internality-externality. Reflecting externally worded items so

that higher scores indicated greater externality, alpha reliability was estimated at .74 with a sample mean of 68.58 and a standard deviation of 12.29.

Analyses and Results

Research Question 1: BAT Use

In order to determine whether students' locus of control orientations mediated their perceptions of teachers' use of the 22 BATs, an unbalanced regression-type multivariate analysis of variance was performed. Within the MANOVA model, students' locus of control scores were categorized as high (external), moderate, or low (internal) based on the following criteria: one standard deviation above the sample mean for externals (above 80, $n = 50$), one standard deviation below the mean for internals (below 58, $n = 61$), and between one standard deviation above and below the mean for moderates ($n = 181$). The total N of 292 indicates some missing data for locus of control. The criterion variables included in the model were students' perceived-use responses to the 22 BATs.

The multivariate model was significant (Wilks' Lambda = .799, F_{APP} (44/536) = 1.44, $p < .03$) indicating that locus of control orientations did mediate this college sample's perceptions of teachers' BAT use. To probe this result, a series of unbalanced regression-type one-way analyses of variance were performed for each of the 22 BATs. Follow-up pairwise t-tests also were computed to assess significant contrasts.[1]

Significant locus of control effects were obtained for 14 of the 22 analyses (Table 1). In 10 cases, externals perceived greater teacher use of the given BAT than did either moderates or internals: Immediate Reward from Behavior, Deferred Reward, Reward from Others, Self-Esteem, Punishment from

Teacher, Guilt, Responsibility to Class, Debt, Altruism, and Peer Modeling. Externals also perceived greater teacher use of the Personal (Student) Responsibility BAT than did moderates or internals; moderates perceived greater use of this same BAT than did internals. Finally, internals reported their teachers using Teacher/Student Relationship-Negative, Legitimate Higher Authority and Legitimate Teacher Authority significantly less frequently than did either externals or moderates.

Insert Table 1 about here

In answer to the first research question, then, locus of control does mediate college students' perceptions of how frequently their teachers use certain BATs. These results suggested that such perceptions might discriminate among students with different internal-external control orientations. To test this possibility, discriminant analysis procedures were employed across the same 3-group locus of control categorization (externals, moderates, and internals). In this way, locus of control defined the classification (dependent) variable and perceptions of teacher use of the 22 BATs defined the discriminant (independent) variables.

A test of the overall discriminant model was significant (Wilks' Lambda = .799, F_{APP} (44/536) = 1.44, R_c^2 = .13 on the first canonical root, $p < .03$). Unbiased percentage of correct classification in the external category was 58%; in the moderate category, 42%; and in the internal category, 53%. Correct assignment of subjects to groups was interpreted to be beyond chance expectations (prior probabilities = 33%).

Finally, in order to determine whether a linear combination of a smaller set of perceptions of BAT use would allow for similar correct classifications, a stepwise procedure using a maximum F-to-enter criterion was also performed.

Results revealed that perceptions of the use of 5 BATs produced similar correct classifications (Wilks' Lambda = .865, F_{APP} (10/570) = 4.27, $p < .001$). Entering first was perceptions of use of Personal Student Responsibility; second was Responsibility to Class; third was Reward from Teacher; fourth was Punishment from Teacher; and fifth was Legitimate Teacher Authority. All 5 BATs were significant within this linear combination (univariate F's ranged from 2.21 to 8.10, all p's $< .001$). The standardized canonical coefficients on the first root associated with the perceptions of the 5 BATs were .424, .350, -.447, .527, and -.192, respectively. Thus, while perceptions of all 22 BATs together significantly discriminated among students with different control orientations, a linear combination of 5 BATs provided the most parsimonious classification of externals, moderates, and internals. A random split-sample reliability check of the originally derived discriminant function confirmed the cross-validational stability of the 3-group locus of control categorization.

Research Question 2: BAT Resistance

To determine whether students' locus of control orientations mediated their likelihood of resisting teachers' use of BATs, an unbalanced regression-type multivariate analysis of variance was performed. As in research question one, the predictor variable was operationalized by categorizing locus of control scores into external, moderate, and internal levels. The criterion variables in the MANOVA model were students' likelihood of resisting the 22 BATs. The multivariate model was nonsignificant (F (44/536) = 1.00, n.s.) as were all follow-up unbalanced regression-type analyses of variance.[2] Thus, based on the obtained data, locus of control did not mediate students' likelihood of resisting teachers' use of BATs.

Discussion

The results of this study indicate that locus of control is a significant predictor of students' selective perceptions of teacher BAT use for 14 of the 22 BATs analyzed. For all 14 BATs, externally oriented students perceived their teachers engaging in significantly more control attempts in the classroom than did internally oriented students. Because externals are defined as those who rely on outside forces to govern their behaviors, teachers may be interpreted by externals as those "powerful others" who implement such control. While we might suspect that internals would be selectively sensitive to any external attempts to control, these results suggest that internals selectively perceive their teachers to use significantly less influence. Consequently, externals, as opposed to internals, are potentially more attentive to or perceptive of teacher control attempts.

Moreover, these data suggest that both externals and internals differ in their selective perceptions of the particular BAT type employed in the classroom. Interestingly, while the extreme groupings of externals and internals differed significantly in perceptions of BAT use across all 14 cases, moderates reported an inconsistent pattern of alignment, sharing similar perceptions with externals in some cases and with internals in other cases. Specifically, externals perceived their teachers employing significantly more reward or prosocial type BATs than did moderates or internals: Immediate Reward from Behavior, Deferred Reward, Reward from Others and Self-Esteem. These particular prosocial BATs rely on student, rather than teacher-based appeals. In addition, externals reported their teachers using significantly more BATs that resort to peer pressure or responsibility to others in the class for compliance (i.e., Guilt, Responsibility to Class, Debt, Altruism and Peer Modeling). For externally-oriented students, then, perceptions of control rely primarily on

those BATs that communicate self or peer as sources of control. Perhaps college teachers implement student and peer sources of control more frequently with externals in an effort to disengage from or redirect those students who continually depend on teachers for behavioral guidance. Finally, externals reported their teachers using significantly more Punishment from Teacher. Unable to redirect power successfully to other sources, teachers may resort to this particular teacher-based antisocial strategy to obtain compliance from externals.

In contrast, internals reported that their teachers used all 14 BATs significantly less often than externals. While moderates shared similar perceptions with internals for 10 of those BATs, internals perceived significantly less use of 3 BATs than moderates and externals: Teacher/Student Relationship-Negative, Legitimate Higher Authority and Legitimate Teacher Authority. Perhaps college teachers are less prone to implement such overt authority-based or "powerful other" type appeals with internals in recognition of such students' desire for self-determination and teacher independence. Regardless of actual teacher BAT usage, however, internally oriented students may ignore or distort negative, authority-based appeals for compliance. While externals may be particularly sensitive to teacher control by overestimating the frequency with which teachers employ BATs, internals may underestimate the frequency of actual teacher BAT use. Consequently, those BATs which reflect teacher or authority-based control (i.e., "powerful others") may be selectively disregarded or interpreted by internals as teacher messages of <u>non</u>-control.

The second research question addressed college students' selective resistance to teacher BAT use as a function of locus of control orientation. Results indicated that locus of control was not a significant mediator of students'

likelihood of resisting their instructors' use of the 22 BATs. This finding is in contradiction to previous studies which have shown externals and internals to have different compliance and resistance tendencies (Getter, 1966; Ritchie & Phares, 1969; Ryckman et al., 1972; Strickland, 1970). Perhaps externally-oriented students are unlikely to engage in resistant responses in classrooms characterized by teacher control simply because such contexts are perceived as highly favorable. Conversely, internals may find it irrelevant to report or engage in resistance because they perceive their teachers infrequently employing control.

The findings relevant to our first research question regarding selective perceptions of BAT use suggest important issues for future research. Given that externals, as opposed to internals, report a greater frequency of teacher control attempts, the following research questions should be addressed to differentiate between actual teacher control and perceptions of that control. First, do externals engage in more student misbehaviors than internals? If so, teachers may actually implement more frequent control with externals. Second, do locus of control orientations distort perceptions of actual teacher BAT use? Based on different preferences for sources of control, externals may overestimate the frequency of teacher BAT use while internals may underestimate similar BAT use. The findings relevant to our second research question suggest that future research should examine student locus of control orientations as a predictor of resistance to specific teacher control attempts with actual student misbehaviors. While this investigation failed to find differential resistance responses to teacher BAT use in general, externals and internals may more readily report resistance or compliance with those teacher control attempts anchored in specific misbehavior situations. Such research would enable us to explicate further the relationships among students' locus of control, teacher BAT use and student resistance.

Footnotes

[1]Post hoc power estimates for the series of regression-type ANOVAs were greater than .995 for a medium effect at alpha = .05 and with a sample of 300.

[2]Available power analysis techniques excluded multivariate designs (Garrison & Andersen, 1979), so no power estimate could be determined for the nonsignificant MANOVA. Power estimates for the nonsignificant ANOVAs were .995 for a medium effect at alpha = .05 and a sample mean of 300.

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Table 1

Means for Significant Locus of Control

Effects on Perceived BAT Use

BAT	Externals	Moderates	Internals	F	R^2
Immediate Reward from Behavior	2.96_{ab}	2.43_{a}	2.46_{b}	4.31	.03
Deferred Reward from Behavior	3.38_{ab}	2.87_{a}	2.79_{b}	3.71	.03
Reward from Others	1.96_{ab}	1.63_{a}	1.51_{b}	3.13	.02
Self-Esteem	2.30_{ab}	1.86_{a}	1.72_{b}	4.16	.03
Punishment from Teacher	2.00_{ab}	1.49_{a}	1.36_{b}	6.88	.05
Guilt	1.70_{ab}	1.35_{a}	1.21_{b}	5.22	.03
Teacher/Student Relationship: Negative	1.72_{a}	1.59_{b}	1.31_{ab}	2.93	.02
Legitimate Higher Authority	2.40_{a}	2.36_{b}	1.90_{ab}	3.17	.02
Legitimate Teacher Authority	1.98_{a}	1.86_{b}	1.39_{ab}	4.72	.03
Personal (Student) Responsibility	2.62_{ab}	2.08_{ac}	1.72_{bc}	8.10	.05
Responsibility to Class	2.04_{ab}	1.52_{a}	1.31_{a}	7.92	.05
Debt	1.74_{ab}	1.31_{a}	1.26_{b}	4.99	.03
Altruism	2.20_{ab}	1.72_{a}	1.51_{b}	6.51	.04
Peer Modeling	1.90_{ab}	1.56_{a}	1.41_{b}	3.67	.02

Note: Row means with the same subscript are significantly different, $p < .05$ (df = 2/291 for each F).